PASER Data Upload Process

TAMC IRT

PASER data is collected using the RoadSoft Laptop Data Collector (LDC). Collectors ride the road network observing the road quality and assigning a rating to homogeneous segments. Upon completion the data is exported from the LDC and sent to the TAMC Transportation regions for aggregation, validation and submission to the Investment Reporting Tool (IRT) portal. The submission is in the form of an XML file that details the rating data and describes its location along the road network using the State's Linear Referencing System (LRS).

Upload Process

Users with the role of Region are provided a menu option within the IRT portal to add PASER data. This option is found under the '+Add' menu and is titled 'PASER Ratings.' Selecting this option opens a dialog where they can upload the PASER XML file along with the LDC's Global Positioning System (GPS) log. The GPS log corroborates the data collection and can be used to verify that the data was obtained by driving the road network and not simply manufactured at a static location.

Once the files are identified in the submission form the user presses the Validate button which will send the files to the server where they are stored in the file repository and then processed. The first step in the processing is the validation to ensure quality and accuracy of the information.

PASER Data Validation

There are several validations that are applied to the incoming data. Each identifies a data issue that will result in a failure to add the provided data to the repository. In addition to this pre-processing validation there are also possible post processing messages that can indicate data loading failures.

Pre-Processing Validations

Prior to the data being loaded into the active PASER data repository the following validation are applied:

Validation	Purpose	Message
Check Collection Date	Verifies a collection date exists and filters out ratings that are from previous rating years.	Invalid or missing collection date
Check LRS	Verifies that LRS fields are populated and that the BMP < EMP and the EMP < maximum EMP for the PR	Invalid or missing LRS data LRS data does not match MGF Provided EMP exceeds maximum available EMP from MGF
Check Ratings	Verifies that surface rating is between 1 and 10 when IBR Rating is zero or that surface rating is 0 when IBR Rating is between 1 and 10	Invalid or missing PASER or IBR ratings

Check Lanes	Verifies that the number of lanes supplied is between 1 and 20	Invalid or missing number of lanes
Check Surface Type	Verifies that the supplied surface type is within the IRT surface type domain	Invalid or missing surface type
Check Overlaps	Verify that segment ratings do not overlap if they do then these rating will be marked as invalid because loading them into the database will cause multiple results for those segments and multi count the overlap miles in reports	Rating segments overlap their LRS values

Any record where one of these validation statuses is identified will not be loaded into the IRT PASER data. These validation messages are supplied to the user within the upload dialog.

Post-Processing Messages

While the pre-processing validation identifies most issues up front, so the user can decide on how to proceed prior to loading there are still a few issues that can arise during the incorporation of the data into the portal.

No records to process after validation

This message is returned to the application when all uploaded records are flagged as invalid during the pre-processing phase.

No updates, incoming record ratings are the same or older than the existing data

Within IRT it is possible to load overlapping (or duplicate) PASER data files. The upload process uses the PASER collection date to compare existing data with incoming data. This error is provided when the results of the comparison produces no updates to the PASER repository.

PASER Processing Results

Once the PASER data is processed the user is provided a results page for that file. This page displays the file details, processing status and validation results. The user is also capable of viewing the results as geography. Users are also sent an email upon completion of file processing.

PASER Data Integration

When a PASER file is uploaded, the aforementioned validation is performed and those segments that pass the quality control move on to the next step in the process: integration.

Incoming segments are compared against existing segments by identifying which existing segments overlap the incoming data by LRS. This subset of the entire dataset is then unioned with the incoming data. The union results are compared by collection date with the values from each segment with the maximum date being retained and the others discarded. Each segment within the PASER repository is marked with its origin file so a comparison is performed against the subset result to determine if any records are from the incoming file. If not, then the processing ends with the: *No updates, incoming record ratings are the same or older than the existing data*. Once the most

current data is established and there are records from the incoming file then the existing rows are removed from the PASER repository and the new results are then inserted to replace them. Tracking the origin enables the ability to report how many segments and centerline miles from the upload were added to the repository and also to be able to filter the PASER data by that source so the user can see the result of that files upload.

PASER Data Review

An overview page is provided to review all uploaded PASER data. Available via the 'Review PASER Import' button on the main PASER upload screen, this overview provides a location to view all newly uploaded PASER data. Data is viewable on a map in both individual rating format, as well as a representation of the percent of centerline miles that have been rated. Both formats provide filtering options to further refine the visible data.